

substantially in the pressing plane perpendicular to the roll axis. In this connection, the guide device radially provided between the bearing sleeve and the carrier are preferably arranged in an axially central region of the bearing sleeve and/or centered relative to this bearing sleeve in an axial direction.

Please replace paragraph [0007] with the following amended paragraph:

B1 [0007] With this design, in particular an extremely compact, self-guiding bearing results in whose region a central force introduction is possible. Moreover, the bearing housing is always oriented in accordance with the roll jacket independently of the respective roll strain or roll deflection so that in particular no tilting can occur between the roll jacket and the bearing housing even with a more pronounced roll deflection. Jamming effects are practically precluded in the region of the guide device allowing a tilting movement. Both the radial guiding and the axial guiding of the roll jacket are ensured at the same time via the relevant transmission bearing.

Please replace paragraph [0009] with the following amended paragraph:

B2 [0009] In a preferred practical embodiment of the deflection controlled roll in accordance with the invention, the guide device includes at least one guide member rotatably mounted in the bearing sleeve or the carrier about an axis perpendicular to the pressing plane, said guide member sliding as a follower in a guide provided at the carrier or at the bearing sleeve and being displaceably guided by this substantially parallel to the pressing plane

B2 perpendicular to the roll axis. In this connection, these guide devices can in particular include at least two follower-like guide members provided at opposing sides of the carrier and respectively cooperating with a guide.

Please replace paragraph [0022] with the following amended paragraph:

B3 [0022] It is of advantage if the axial centers of the gear ring, of the bearing arrangement rotatably holding the roll jacket at the bearing housing, of the guide device and/or of the piston in cylinder arrangement essentially lie in a common plane extending perpendicular to the roll axis. It is thus excluded that torques arise in operation which can act disadvantageously on the toothed engagement of the drive toothed arrangement so that the toothed flanks can ideally contact one another within the framework of the bearing clearances in the main bearings.

Please enter the following new paragraphs between paragraphs [0042] and [0043]:

B4 [0042.01] The present invention is directed to a self-adjusting deflection controlled roll that includes a rotating roll jacket, a carrier arranged to axially pass through the roll jacket and structured to be held rotationally fixedly at its axial ends, and at least one supporting member structured and arranged at the carrier to exert a support force on an inner side of the roll jacket in a pressing plane. A bearing housing includes a non-rotating axial bearing sleeve with at least one bearing, and at least one of an axial end of or an axial continuation of the roll jacket is rotatably mounted by the at least one bearing on the non-rotating axial

bearing sleeve. The bearing housing is secured against rotation and extends into a region between the at least one of the axial end or axial continuation of the roll jacket and the carrier. Further, the bearing housing is structured and arranged to be freely movable relative to the carrier substantially in the pressing plane, and the roll jacket is radially supported transversely to the pressing plane by the non-rotating axial bearing sleeve. A guide device, positioned at an axial end of the carrier and radially between the bearing sleeve and the carrier, is structured and arranged to permit both a tilting moving and a movement of the bearing sleeve relative to the carrier substantially in the pressing plane, and the roll jacket being axially fixed at the axial end of the carrier by the guide device.

B4 [0042.02] According to a feature of the invention, the guide device is arranged in at least one of an axially central region of the bearing sleeve and centered relative to the bearing sleeve in an axial direction.

[0042.03] In accordance with another feature of the instant invention, the bearing sleeve is radially supported at the carrier transversely to the pressing plane via the guide device.

[0042.04] Further, the guide device includes at least one guide member rotatably mounted in one of the bearing sleeve and the carrier about an axis perpendicular to the pressing plane. The at least one guide member is structured and arranged to slide as a follower in a guide provided at one of the carrier or the bearing sleeve and to be displaceably guided essentially parallel to the pressing plane. Further still, the at least one guide member includes at least


two follower-like guide members provided on mutually opposite sides of the carrier and each cooperating with a respective guide. The guide, arranged to cooperate with the at least one guide member, is formed at a counter plate secured to the one of the carrier or the bearing sleeve.

[0042.05] According to still another feature of the present invention, the guide member includes comprises a flange with a collar.

B4 **[0042.06]** The roll jacket is axially fixed to the axial end of the carrier at a drive side via the guide device. Further, the roll jacket is supported radially at a guide side opposite the drive side transversely to the pressing plane via the axial bearing sleeve, and is axially displaceable. The bearing sleeve is radially supported at the carrier via at least two bearing members arranged at mutually opposite carrier sides, and the bearing members are rotatably mounted in one of the bearing sleeve or the carrier for rotation about an axis perpendicular to the pressing plane. Still further, the bearing members cooperate with a counter surface which is formed by a counter plate secured to one of the carrier or the bearing sleeve.

[0042.07] In accordance with a further feature of the invention, at least one piston in cylinder arrangement is structured and arranged to act generally in the pressing plane is provided radially between the bearing sleeve and the carrier. The at least one piston in cylinder arrangement is positioned at at least one of a support member side of at least one of the carrier and at an opposite carrier side. The piston in cylinder arrangement is positioned

to at least one of relieve the roll jacket from weight forces acting outside a working width of the roll jacket, one of load or relieve a respective jacket end in order to influence a pressing force distribution in a press nip by controlled pressure medium loading, or fix the roll jacket in place in a position raised from a counter roll by shutting off a pressure medium backflow from the piston in cylinder arrangement.

 [0042.08] Moreover, the bearing sleeve is positioned in a region of a carrier spigot narrowed with respect to an axially central region of the carrier. A piston in cylinder arrangement is arranged between the narrowed carrier spigot and the bearing sleeve.

[0042.09] Further still, a piston of a piston in cylinder arrangement structured and arranged to act on the bearing sleeve comprises a relief chamber fed with pressure fluid at a side confronting the bearing sleeve. The relief chamber is fed via at least one capillary. The feeding of the relief chamber takes place via a pressure chamber of the piston in cylinder arrangement and through the piston. A feeding of the relief chamber takes place from a side of the bearing sleeve.

[0042.10] According to another feature of the instant invention, a piston of a piston in cylinder arrangement is arranged to directly contact an inner side of the bearing sleeve.

[0042.11] In accordance with a still further feature, a piston of a piston in cylinder arrangement is arranged to contact a shallow side of an intermediate member arranged between the carrier and the bearing sleeve.

[0042.12] The at least one of the axial end of or the axial continuation of the roll jacket is rotatably mounted at the bearing sleeve by two axially spaced apart bearings. The two axially spaced apart bearings are each formed by a rolling bearing.

[0042.13] Still further, the at least one supporting member can include a plurality of supporting members arranged to form a single-zone roll, such that the plurality of supporting members are loaded with a same pressure. Alternatively, the at least one supporting member can include a plurality of supporting members arranged to form a multi-zone roll, such that at least some of the plurality of supporting members are loaded with different pressures.

B4 [0042.14] The at least one of the axial end of or the axial continuation of the roll jacket is located at a drive side is arranged to outwardly radially carry a gear ring structured and arranged to the roll drive. Axial centers of at least one of the gear ring, the bearing arrangement, the guide device, and a piston in cylinder arrangement lie substantially in a common plane perpendicular to a roll axis.

[0042.15] According to still another feature of the invention, frames are arranged to rotationally fixedly hold the ends of the carrier.

[0042.16] In accordance with yet another feature of the present invention, the pressing plane is perpendicular to a roll axis.

Please replace paragraphs [0052] - [0054] with the following amended paragraphs:

B5 [0052] As can in particular be recognized with reference to Figures 1 to 3 and 6 (right hand half), the roll jacket 12 is moreover axially fixed at the carrier 14 at the drive-side axial end

via guide device 26 provided radially between the bearing sleeve 22 of the bearing housing 24 and the carrier 14. These guide devices 26 allow both a tilting movement and a movement of the bearing sleeve 22 relative to the carrier 14 substantially in the pressing plane perpendicular too the roll axis.

B5 [0053] As can best be recognized with reference to Figure 1, the guide device 26 provided radially between the bearing sleeve 22 and the carrier 14 are arranged in an axially central region of the bearing sleeve 22 or central to this bearing sleeve 22 in the axial direction.

[0054] The bearing sleeve is not only fixed to the carrier 14 axially via these guide devices, but at the same time also supported radially at the carrier transversely to the pressing plane (cf. in particular also Figures 2, 3 and 6; right hand half).

Please replace paragraphs [0069] with the following amended paragraph:

B6 [0069] The axial centers of the ring gear 48, of the bearing arrangement 20 rotatably holding the roll jacket 12 at the bearing housing 24, of the guide device 26, of the piston in cylinder arrangement 34 and/or of the pinion 50 can, as shown in Figure 1, substantially lie in a common plane E standing perpendicular to the roll axis X.

One page 16, "Reference numeral list," replace line 12 with the following amended line:

26 guide device

IN THE CLAIMS

Please cancel claims 1 - 28 without prejudice or disclaimer.

Please enter the following new claims for consideration by the Examiner:

- 29. A self-adjusting deflection controlled roll comprising:
a rotating roll jacket;